



IN THE UNITED STATES  
PATENT AND TRADEMARK OFFICE

APPLICANT: Laddie L. James TITLE: Improved Tack Spraying Apparatus  
SERIAL NO.: 09/642,868 ART UNIT: 3752  
FILING DATE: November 1, 2000 EXAMINER: Nguyen, Dinh Q.  
DOCKET NO.: 9066.002

REPLY BRIEF IN SUPPORT OF APPEAL

The Honorable Commissioner of  
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Dear Sir:

The applicant reply brief is in support of the applicant's appeal. A petition for a one (1) month extension of time and the fee for the same is submitted herewith. If any additional extension of time is required, please consider this a request therefor. No additional fees are believed to be due at this time; however, if any are due the Commissioner is authorized and respectfully requested to charge the same to deposit account no. 18-2210.

The examiner's rejections are respectfully traversed, and the Board is respectfully requested to reverse the examiner's rejections of the applicant's claims for the reasons set forth in the applicant's original brief and for the reasons detailed below.

**A. Response to Examiner's Arguments**

**1. Claims 1-4, 12-16 and the Examiner's Anticipation Arguments**

The examiner continues to insist either that he does not have to establish that the Herzog

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reference is capable of dispensing tack or that Herzog is inherently capable of dispensing tack. The first argument can be dispensed with fairly easily. Each of the claims undeniably contain a functional requirement that the claimed "tack spraying device" and "motorized tack spraying vehicle" be capable of dispensing tack. The CCPA and the Federal Circuit have repeatedly held that the Patent Office cannot ignore functional limitations. *See, e.g., In re Stencel*, 828 F.2d 751, 755 (Fed. Cir. 1987); *Application of Echerd*, 471 F.2d 632, 635 (CCPA 1973); *Swengal v. Burkig*, 455 F.2d 577, 582 (CCPA 1972); *Application of Wilson*, 424 F.2d 1382, 1385 (CCPA 1970). Accordingly, the examiner simply cannot reject the applicant's claims under § 102 without showing that the allegedly anticipatory reference satisfies each of the claims limitations, including its functional ones. This the examiner has failed to do.

The examiner does, however, contend that the allegedly anticipatory reference, Herzog, is inherently capable of dispensing tack. The examiner contends that because Herzog discloses the dispersal of water at 35 p.s.i.<sup>1</sup>, Herzog must be capable of dispersing tack since the applicant disperses tack at 4 to 14 p.s.i. This reasoning is inappropriate for several reasons, not least of which is that it relies upon the applicant's teachings rather than the prior art to establish the alleged inherency. *See, In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991).

The examiner's argument also oversimplifies the application of tack. Unlike water, tack contains polymers which will readily form large polymer balls. These can quickly clog the tack spraying device. Simply increasing the pressure will not prevent these balls from lodging in the

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<sup>1</sup> The examiner specifically contends that Herzog teaches operating pressures of "up to 35 p.s.i." What Herzog actually teaches is operating pressures of "35 p.s.i. and greater." Herzog, Col. 2, ln. 7.

lines of the device and/or the nozzle. In fact, as increasing the pressure will increase the rate of flow through the tack spraying device, increasing the pressure will raise the number of polymer balls that attempt to pass through an orifice or other constriction of the tack spraying device *per unit of time*. This is one of the ways clogs form. A single polymer ball may be able to pass through an opening or constriction. However, as the flow rate increases, multiple polymer balls may enter the constriction simultaneously. While one polymer ball may have been able to pass through the constriction, three or four cannot. They become lodged in the constriction and other polymer balls build up behind them until the constriction is completely closed. Thus, increasing pressure in the tank can actually make it less likely that a device will be able to discharge tack. Therefore, the fact that Herzog discloses pressures of 35 p.s.i. does not, as the examiner contends, establish that the device of Herzog would be capable of discharging tack. Accordingly, the examiner has not established that the ability to disperse tack is “*necessarily present*” in the allegedly anticipatory reference. MPEP § 2112 (emphasis in original). Having failed to do this, the examiner has not met his burden of establishing that Herzog inherently anticipates the applicant’s invention. Id.

**2. Claims 1-4, 12-16 and the Examiner’s Obviousness Arguments**

The examiner contends that claims 1-4 and 12-16 are rendered obvious by the combination of Herzog, Furman, and Haupt. The examiner’s earlier attempts to provide a basis for the combination of Herzog, Furman, and Haupt have been addressed in the applicant’s previous briefs.

The examiner has now added the following:

Therefore, it would have been obvious to one having ordinary skill in the art to have provided the device of Herzog with any type of material to be dispensed as suggested by Furman (using exhaust gas to pressurize a liquid within a storage

tank) and to use the system for spraying tack material especially as taught by Haupt (pressurized an asphalt tank to force the asphalt to force the asphalt to spray bars 23 a and 23 b to spray a road surface). Doing so would provide a way to pressurize a liquid within a tank (Furman's column 2, lines 11-14) and forcing the liquid to the spray bars (Haupt's column 3; lines 25-27).

Examiner's Brief, p. 6.

Initially, the applicant takes issue with the examiner's reading of Furman. Furman describes its process as a "method of spraying a liquid substance." Col. 2, ln. 11. However, from this the examiner infers that the device of Furman will work for "*any type of material*." That is, Furman discloses that it will work for dispensing some liquids. From that, the examiner draws the conclusion that Furman will work for *all* liquids. Furman is simply too slender a reed to support such a weight. The class of materials qualifying as liquids encompasses an enormous range of substances of widely varying viscosities and consistencies. In the absence of an express teaching in Furman that the device disclosed therein is able to dispense any type of liquid regardless of its consistency or viscosity, there is simply no basis for the examiner's conclusion that Furman will work with any liquid.

Without this unreasonably expansive reading of Furman, the examiner's reasoning will not stand. Herzog does not anticipate or obviate the present invention because it fails to teach or suggest that engine exhaust can be used to dispense tack. Neither Furman nor Haupt provide any reason to believe that engine exhaust could be used to dispense tack. Thus, there is simply no basis to conclude from the prior art that the combination of Herzog, Furman, and Haupt would successfully dispense tack.

Separate and apart from whether the examiner has established a reasonable basis to expect that the combination of Herzog, Furman, and Haupt would be successful, the examiner simply has

not made any attempt to show how the prior art suggests the desirability of the claimed invention, as he must to meet his *prima facie* burden. MPEP § 2143.01. Herzog teaches the use of engine exhaust to dispense water. Furman teaches the use of engine exhaust to dispense other liquids, namely insecticides and flammable fuels. Haupt teaches the application of tack with a rotary pump. Nothing in any of these references suggests the desirability of applying tack with engine exhaust. More importantly, the examiner has not attempted to show how the prior art suggests this would be desirable. Accordingly, the examiner has not met his *prima facie* burden with respect to these rejections.

**3. The Examiner's Contention that Claims 7-11 and 19-21 are Matters of Design Choice**

The examiner contends on page 9 of his brief that claims 7-11 and 19-21 are merely matters of design choice. This overlooks the fact that claims 7-10, 19, and 21 address one of the central problems in the application of tack: polymer balls. By making the orifices and lines of the claimed tack spraying devices large enough to allow the passage of polymer balls, clogging may be substantially reduced or eliminated. The examiner has not even cited a reference which identifies polymer ball clogging as a problem in tack application, much less cited a reference that teaches the solution claimed by the applicant.

To establish a *prima facie* case of obviousness, the examiner must show that "the prior art reference (or references when combined) . . . teach or suggest all of the claim limitations." MPEP § 2143; *See, also*, MPEP § 2143. The examiner has made no attempt to establish that the prior art teaches any of the limitations of claims 7-11 or 19-21. Accordingly, the examiner has not met his *prima facie* burden with respect to these claims.

**4. Claims 5, 6, 17, and 18 and the Examiner's Obviousness Arguments**

Again, the applicant notes that to establish a *prima facie* case of obviousness, the examiner must show that "the prior art reference (or references when combined) . . . teach or suggest all of the claim limitations." MPEP § 2143; *See, also*, MPEP § 2143. Here claims 5 and 17 require a nozzle rate of at least 0.02 gallons per square yard and claims 6 and 18 require a nozzle rate of between 0.02 gallons per square yard and 0.08 gallons per square yard. The prior art cited by the examiner discloses an application rate of between 0.15 and 0.65 gallons per yard. *See*, Clark at Col. 4, ll. 59-67. These rates are an *order of magnitude higher* than the 0.02 to 0.08 gallons per square yard recited in the rejected claims. Accordingly, the examiner has not cited any combination of references that establishes each element of the rejected claims, and particularly of claims 6 and 18. Accordingly, the examiner has not met his *prima facie* burden with respect to these claims. MPEP § 2143.

The examiner also attempts to dismiss claims 5, 6, 17, and 18 as mere matters of design choice. However, this ignores the significance of these application rates. As noted above, one of the ways the present invention addresses the problem of polymer ball clogging is by increasing the size of the lines and openings. Another is by reducing the flow rate of tack through the system to reduce the incidence of polymer ball contact with apertures and constrictions in the tack spraying. This will make it less likely that multiple polymer balls will encounter an aperture or constriction at one time, thereby reducing the likelihood that a clog will form. The application rate directly address this solution, and are not mere matters of design choice.

**B. Conclusion**

For the reasons stated above and in the applicant's original and supplemental briefs, the

examiner's rejections should be overturned and the claims remaining in the application should be allowed.

Respectfully submitted:



Dated: April 13, 2004

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